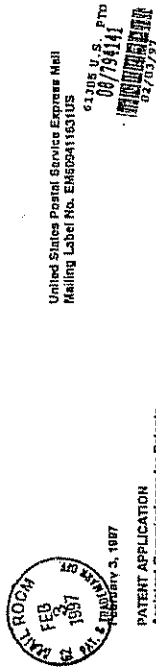


EXHIBIT 10

(part 1)

(FACE)



PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed for filing is a complete patent application of Richard D. Bednar, entitled "GANG-TYPE ROTARY LAWN MOWER" including the following documents:

Specification including Claims - 20 pages
Abstract of the Disclosure
Drawings - 5 sheets
Declaration, Power of Attorney

Also enclosed are:

Check No. 079955 for \$770.00 for filing fee
Assignment to Remanence America Corporation
Cover letter for assignment
Check No. 079956 for \$40.00 for assignment recording fee

The filing fee has been calculated as shown below.

(1) FEE	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) BASIC FEE
TOTAL CLAIMS	20	0	X \$22.00	
MINOR CLAMS	1	0	X \$40.00	
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				\$770.00

Change or credit Deposit Account No. 13-3080 with any shortage or overpayment of the above fee. A duplicate of this sheet is enclosed. IN NO EVENT CAN THE ISSUE FEE BE CHARGED TO THE DEPOSIT ACCOUNT.

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Respectfully submitted,

David R. Price

DAVID R. PRICE
Reg. No. 31,557

File No. 78209/9009
cc: Bednarling

U.S. PATENT APPLICATION		CLASS		CLASS		CLASS		CLASS	
08/794,141		02/03/97		056		3401			
RICHARD D. BEDNAR, LAKE MILLS, WI.									
CONTINUING DATA*** VERIFIED									
FOREIGN/PTC APPLICATIONS*** VERIFIED									
FOREIGN FILING LICENSE GRANTED 04/09/97									
STATE OR COUNTRY	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS
WI	5	20	3	3	3	3	3	3	3
DAVID R. PRICE	MICHAEL, BEST & FRIEDRICH	100 EAST WISCONSIN AVENUE	MILWAUKEE WI 53202-4108						
GANG-TYPE ROTARY LAWN MOWER									
This is to certify that annexed hereto is a true copy from the records of the United States Patent and Trademark Office of the application which is identified above.									
COMMISSIONER OF PATENTS AND TRADEMARKS									

GANG-TYPE ROTARY LAWN MOWER

CLASS U.S. PAT.
NO. 7,111,111

9710-101 A

BACKGROUND OF THE INVENTION

The invention relates to rotary lawn mowers and to gang-type lawn mowers.

Historically, reel mowers have been used to cut golf course roughs. It is generally recognized that rotary mowers are better suited for cutting tall grass, where scalping is not a problem, while reel mowers are better for shorter cutting. A gang of reels can be either attached directly to the frame on which the operator rides, or pulled behind a tractor. Pull-behind or tow-behind rotary gangs are also known. These can be driven either by a power takeoff or by a separate engine. Tow-behind gangs, whether reel or rotary, are generally undesirable for cutting a golf course rough because close trimming is difficult. Thus, rotary mowers have not been used to cut golf course roughs, which require close trimming and the ability to cut undulating terrain at a relatively short length.

SUMMARY OF THE INVENTION

The invention provides a gang-type rotary lawn mower suitable for cutting a golf course rough. This is a tremendous improvement over the known prior art, because a rotary mower typically requires substantially less maintenance than a reel mower. The lawn mower has single-spindle cutting decks attached directly to the frame on which the operator rides, with a front row of two or more cutting decks in front of the front wheels,

and with a rear row of one or more cutting decks between the front and rear wheels. The invention also provides an improved arrangement for mounting a rotary cutting deck on a lawn mower frame. Each deck is mounted on its own lifting arm so that the deck can move vertically relative to the frame and can pivot relative to the frame about three mutually perpendicular axes.

More particularly, the invention provides a gang-type rotary lawn mower comprising a frame supported by front and rear wheels, an operator's seat mounted on the frame, at least two side-by-side front cutting deck assemblies mounted on the frame in front of the front wheels, and at least one rear cutting deck assembly mounted on the frame behind the front wheels and in front of the rear wheels. Each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates, front wheels supporting the side plates for movement over the ground, and a rear roller extending between the side plates and supporting the side plates for movement over the ground. Each deck assembly also includes a single-spindle cutting deck located between the side plates and in front of the roller, the deck being mounted on the side plates such that the height of the deck relative to the ground is adjustable. The roller extends across substantially the entire width of the deck. The roller consists of scalping and stripes the grass, both of which are aesthetically desirable.

Each deck assembly is connected to the frame by a generally L-shaped, horizontally-extending lifting arm operable to lift the

Fig. 4 is a side elevational view of the cutting deck assembly.

Fig. 5 is a rear elevational view of the cutting deck assembly.

Fig. 6 is a view taken along line 6--6 in Fig. 3.

Before one embodiment of the invention is explained in detail, it is to be understood that the invention is not limited in its application to the details of the construction and the arrangements of components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced or being carried out in various ways. Also, it is understood that the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A lawn mower 10 embodying the invention is illustrated in Fig. 1. Except as described below, the lawn mower 10 is identical to the lawn mower disclosed in U.S. Patent Application Serial No. ~~08/99,381~~ ^{08/99,381}, filed January 22, 1997, titled "PARALLEL-SERIES FOUR-WHEEL-DRIVE HYDRAULIC CIRCUIT FOR A RIDING LAWN MOWER" and assigned to the assignee hereof. The lawn mower 10 comprises a frame 12 (partially shown in Figs. 2-5) supported by front wheels 14 and rear wheels 16 for movement over the ground. While the illustrated lawn mower 10 is rear-steering and has

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deck assembly relative to the frame. Each deck assembly is connected to the frame by its own lifting arm. Each lifting arm has an inner end pivotally connected to the frame. A cross member is mounted on the outer end of the lifting arm for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction. One end of the cross member is connected to one of the deck assembly side plates for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other end of the cross member is connected to the other side plate for pivotal movement about the same axis.

This construction enables the lawn mower to cut the undulating terrain of a golf course rough and to be controlled for close trimming. Also, as mentioned above, the lawn mower requires much less maintenance than the reel mowers historically used to cut a golf course rough.

Other features and advantages of the invention will become apparent to those skilled in the art upon review of the following detailed description, claims and drawings.

DESCRIPTION OF THE DRAWINGS

Fig. 1 is a top plan view of a lawn mower embodying the invention.

Fig. 2 is a perspective view of a cutting deck assembly.

Fig. 3 is a top plan view of the cutting deck assembly.

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herein to mean the direction from one side of the lawn mower to the other, i.e., perpendicular to the forward-rearward direction. Two front wheels 50 rotate about an axle 54 (Figs. 2 and 3) extending between the side plates 46 and 48 in front of the deck 38, such that each front wheel 50 supports one of the side plates 46 and 48 and the deck 38 for movement over the ground. A rear roller 58 extends between the side plates 46 and 48 and also supports the side plates 46 and 48 and the deck 38 for movement over the ground. The roller 58 is behind the deck 38 and extends across substantially the entire width of the deck 38. The roller 58 resists scalping and stripes the grass.

The deck 38 is mounted on the side plates 46 and 48 such that the height of the deck 38 relative to the ground is adjustable. In the illustrated construction, the deck 38 includes spaced deck plates 66 and 68 (Figs. 3 and 5) extending upwardly adjacent the side plates 46 and 48, respectively. The upper end of each side plate 46 or 48 has thereon (see Fig. 2) generally horizontal, inwardly-extending ears 69 and 70, with the ear 69 adjacent the front of the side plate and the ear 70 adjacent the rear of the side plate. Fixed to the ears 69 and 70 of each side plate 46 or 48 is an elongated plate member 71 having outwardly-extending ears 72 and 73 respectively secured to the ears 69 and 70 by suitable means such as bolts or screws 74. Each side plate 46 or 48 and the corresponding plate member 71 has therein (see Figs. 4 and 6) a series of holes 76. Each of the deck plates 66 and 68 has therein several vertically-spaced

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four-wheel drive, it should be understood that the invention is applicable to front-steering or two-wheel-drive lawn mowers.

The lawn mower 10 further comprises a power source 18 supported by the frame 12. The power source may be any type known in the art, such as a gasoline-powered, internal-combustion engine. The engine drives a hydraulic pump (not shown) that supplies hydraulic fluid to hydraulic motors (not shown) drivingly connected to the wheels 14 and 16. The lawn mower 10 further comprises an operator's seat 20, and a conventional steering system, including a steering wheel 22, enabling the operator to steer the lawn mower 10. In the illustrated construction, the steering system is hydraulic and is connected to the rear wheels 16 to steer the lawn mower 10.

The lawn mower 10 further comprises front and rear rows 26 and 30, respectively, of cutting deck assemblies 34. More particularly, in the illustrated construction, the lawn mower 10 has three side-by-side front cutting deck assemblies 34 in front of the front wheels 14, and two rear cutting deck assemblies 34 behind the front wheels 14 and in front of the rear wheels 16. As is known in the art, each rear deck assembly 34 is aligned with the gap between two adjacent front deck assemblies 34.

Each of the cutting deck assemblies 34 includes (see Fig. 2-5) a single-spindle matching deck 38 defining a downwardly opening space 42 (Fig. 4). The deck 38 is located between and supported by a pair of laterally-spaced, generally vertically-extending side plates 46 and 48. The term "lateral" is used

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series of holes 78. Bolts 80 extending through holes 76 in the side plates 46 and 48 and in the plate members 71 and through holes 78 in the deck plates 66 and 68 secure the deck 38 to the side plates 46 and 48. The height of the deck 38 is adjusted by changing the holes 78 in the deck plates 66 and 68 and/or the holes in the side plates 46 and 48 and in the plate members 71 through which the bolts 80 extend.

A single spindle 84 (Fig. 4) is mounted for rotation about a generally vertical axis within the space 42 defined by the deck 38. The spindle 84 is driven by a hydraulic motor 88 on top of the deck 38. The above-mentioned pump supplies hydraulic fluid to the motor 88. It should be understood that other means could be used to drive the spindle 84.

A set of cutting blades is mounted on the spindle 84 for rotation therewith. In the illustrated construction, as shown in Figs. 3 and 4, each blade set includes a lower, leading blade 92 and an upper, trailing blade 96. The leading blade 92 has a leading cutting edge and an upwardly angled trailing edge or lift. Preferably, the lift of the leading blade 92 is angled upwardly at an angle of approximately forty-five degrees. The trailing blade 96 has a leading cutting edge for cutting

clippings deflected upwardly by the lift of the leading blade 92. The blades are preferably identical to those disclosed in U.S. Patent Application Serial No. 09/22,282, filed January 22, 1997, titled "ROTARY LAWN MOWER MULCHING DECK" and assigned to the

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assignee hereof. In alternative embodiments of the invention, different blade arrangements can be employed.

Each of the deck assemblies 34 is mounted on the frame 12 by a generally L-shaped, horizontally-extending lifting arm 112, such that each deck assembly is mounted on its own lifting arm 112. The lifting arm 112 has (see Figs. 2 and 3) a laterally-extending inner leg 116 with an inner end connected to the frame 12 for pivotal movement about a generally horizontal axis 120 extending in the forward-rearward direction. The arm 112 also has an outer leg 124 extending in the forward-rearward direction. A cross member 128 is mounted on the outer end of the outer leg 124 for pivotal movement about a generally vertical axis 132 and about a generally horizontal axis 136 extending in the forward-rearward direction. Each of the opposite, laterally-spaced ends of the cross member 128 has thereon (see Figs. 2, 3, 5 and 6) a downwardly and slightly rearwardly extending arm 140. The lower end of one arm 140 is connected to the side plate 46 for pivotal movement about a generally horizontal, laterally-extending axis 144 adjacent the forward ends of the side plates 46 and 48. The lower end of the other arm 140 is connected to the side plate 48 for pivotal movement about the axis 144.

A hydraulic assembly 148 (partially shown only in Fig. 5) connected between the arm 112 and the frame 12 pivots the arm about the axis 120 for lifting and lowering the deck 38. When the deck is lowered for cutting, the hydraulic assembly allows the lifting arm to "float," thereby allowing the deck 38 to move

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vertically relative to the frame 12. The connection of the deck 38 to the arm 112 via the cross member 128 allows the deck 38 to pivot relative to the frame 12 about the three mutually perpendicular axes 132, 136 and 144. This mounting arrangement enables the deck 38 to adjust to undulating terrain, thereby substantially avoiding scalping.

It should be understood that the lawn mower 10 could have only two or more than three cutting decks in the front row, and only one or more than two cutting decks in the rear row. Also, other arrangements could be used to mount the decks on the frame 12.

Various features of the invention are set forth in the following claims.

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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CLAIMS

1. A lawn mower comprising:
a frame supported by wheels for movement over the ground;
a power source which is mounted on the frame and which drives at least two of the wheels;

an operator's seat mounted on the frame;
a steering system enabling the operator to steer the lawn mower;

at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and

at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies;

each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single-spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.

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3. A lawn mower as set forth in claim 1 wherein each deck assembly also includes a rear roller supporting the associated deck for movement over the ground, and wherein the deck has a width such that the roller extends across substantially the entire width of the deck.

4. A down movement and forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable.

5. A lawn mower as set forth in claim 1 wherein each deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivingly connected to the spindle.

6. A lawn mower as set forth in claim 1 wherein each deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

A turn-mover is set forth to obtain a wherein each dock assembly is connected to the frame by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates of the associated dock assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of the cross member ends being connected to the other of the side plates of the associated dock assembly for pivotal movement about the generally horizontal, laterally-extending axis.

8. A lawn mower as set forth in claim 7 wherein each of the deck assemblies is connected to the frame by a respective generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

9. A lawn mower as set forth in claim 8 wherein the arm is operable to lift the associated deck assembly relative to the frame.

10. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.

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11. A rotary lawn mower comprising

a frame supported by wheels for movement over the ground, a power source which is mounted on the frame and which drives at least two of the wheels, an operator's seat mounted on the frame, a steering system enabling the operator to steer the lawn mower, and a rotary cutting deck assembly including a pair of laterally-spaced, generally vertically-extending side plates which have forward ends and which are supported for movement over the ground, a single-spindle cutting deck defining a downwardly opening space, the deck being located between the side plates and being mounted on the side plates such that the height of the deck relative to the ground is adjustable, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, the deck assembly being connected to the frame by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of the cross member ends being connected to the other

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the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

12. A lawn mower as set forth in claim 11 wherein the deck assembly is connected to the frame by a generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

13. A lawn mower as set forth in claim 12 wherein the arm is operable to lift the deck assembly relative to the frame.

14. A lawn mower as set forth in claim 13 wherein the deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivingly connected to the spindle.

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15. A lawn mower as set forth in claim 14 wherein the deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

16. A lawn mower as set forth in claim 15 wherein the deck assembly also includes a first front wheel supporting one of the side plates for movement over the ground, a second front wheel supporting the other of the side plates for movement over the ground, and a rear roller extending between the side plates and supporting the side plates for movement over the ground, wherein the deck is located in front of the roller, and wherein the deck has a width such that the roller extends across substantially the entire width of the deck.

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16. A lawn mower as set forth in claim 1, wherein the ends of the cross member have thereon respective downwardly extending arms, the arms having respective lower ends, the lower end of one of the arms being connected to one of the side plates for pivotal movement about the generally horizontal, laterally-extending axis, and the lower end of the other of the arms being connected to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

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17. A gang-type rotary lawn mower comprising a frame, a pair of front wheels supporting the frame for movement over the ground, a pair of rear wheels supporting the frame for movement over the ground, a power source which is mounted on the frame and which drives at least one of the pairs of wheels, an operator's seat mounted on the frame, a steering system enabling the operator to steer the lawn mower, at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and at least one rear rotary cutting deck assembly mounted on the frame behind the front wheels and in front of the rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies, each of the front and rear deck assemblies including a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, a second front wheel supporting the other of the side plates for movement over the ground, a rear roller extending between the side plates and supporting the side plates for movement over the ground, a

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the cross member ends being connected to the other of the side plates of the associated deck assembly for pivotal movement about the generally horizontal, laterally-extending axis.

^{18/19} A lawn mower as set forth in claim ~~18~~ ¹⁷ wherein each deck assembly also includes a hydraulic motor which is mounted on the deck and which is drivably connected to the spindle.

¹⁹ A lawn mower as set forth in claim ~~18~~ ¹⁷ wherein each deck assembly includes a set of cutting blades mounted on the spindle for rotation therewith, the set of blades including a lower, leading blade having a leading cutting edge and an upwardly angled trailing edge, and an upper, trailing blade having a leading cutting edge for cutting clippings deflected upwardly by the upwardly angled trailing edge of the leading blade, the trailing blade extending at a non-perpendicular angle relative to the leading blade so that clippings coming off the trailing edge of the leading blade are cut immediately by the trailing blade before the clippings start swirling around within the space.

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single-spindle cutting deck defining a downwardly opening space, the deck being located between the side plates and in front of the roller and being mounted on the side plates such that the height of the deck relative to the ground is adjustable. the deck having a width such that the roller extends across substantially the entire width of the deck, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and

each of the deck assemblies being connected to the frame by a respective generally L-shaped, horizontally-extending lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame, each arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and each arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and a cross member mounted on the outer end of the outer leg for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates of the associated deck assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of

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Declaration and Power of Attorney For Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled "GANG-TYPE ROTARY LAWN MOWER" (Attorney Docket No. 78209/9089), the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, 51.56.

And I hereby appoint JOSEPH A. GEMICHANI, (Reg. No. 19,482), ROBERT E. CLEHNEY (Reg. No. 19,287), DAVID H. SHYTH (Reg. No. 27,595), GLENN A. BUSE (Reg. No. 24,217), FRED KIVITT (Reg. No. 19,158), DAVID R. PRICE (Reg. No. 31,557), ROBERT S. BRISER (Reg. No. 28,687), HAROLD H. MICHAEL (Reg. No. 15,974), CASIMIR F. LASKA (Reg. No. 30,862), KENT S. BANTA (Reg. No. 29,042), DAVID L. DE BROIN (Reg. No. 35,489), TIMOTHY H. KELLEY (Reg. No. 34,201), ELIZABETH HUNT SCHOETTLY (Reg. No. 36,922), BILLIE JEAN STRANDT (Reg. No. 36,940), THOMAS A. MILLER (Reg. No. 36,871), KEVIN P. MORAN (Reg. No. 37,193) and WILFOLD A. ZIARRO (Reg. No. 35,888), 100 East Wisconsin Avenue, Milwaukee, Wisconsin 53202-4108, Telephone (414) 271-6560, and each or any of them, my attorneys or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

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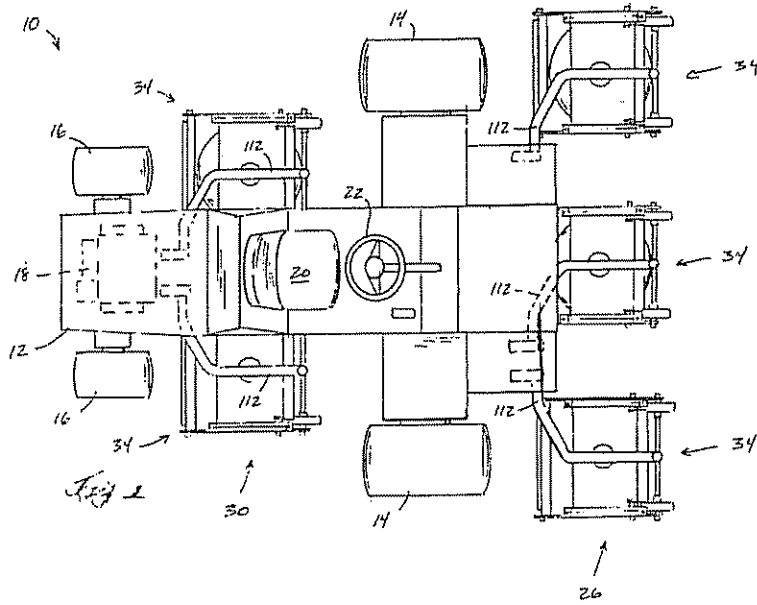
David R. Brice
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ABSTRACT OF THE DISCLOSURE

A gang-type rotary lawn mower including a frame supported by wheels for movement over the ground, a power source which is mounted on the frame and which drives at least two of the wheels, an operator's seat mounted on the frame, a steering system enabling the operator to steer the lawn mower, at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies. Each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies, each of the front and rear deck assemblies including a single-spindle mowing deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith.

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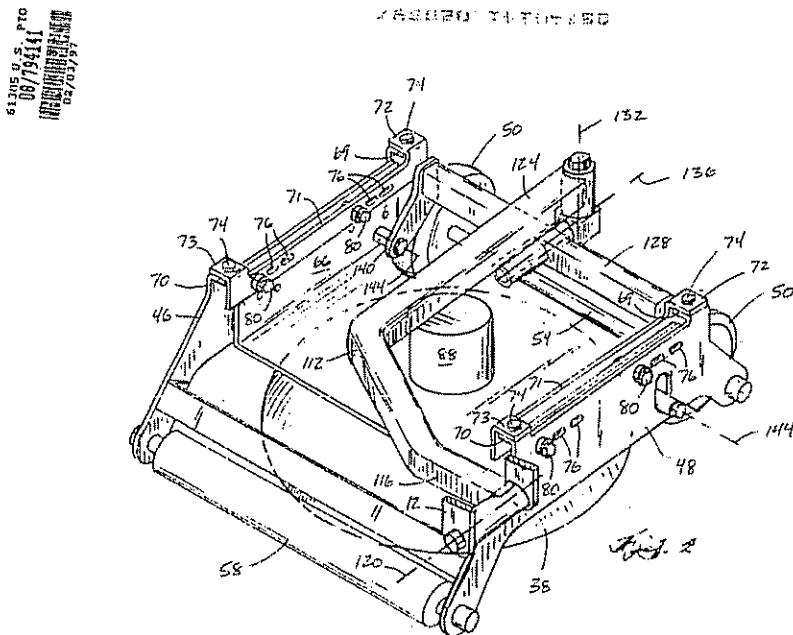
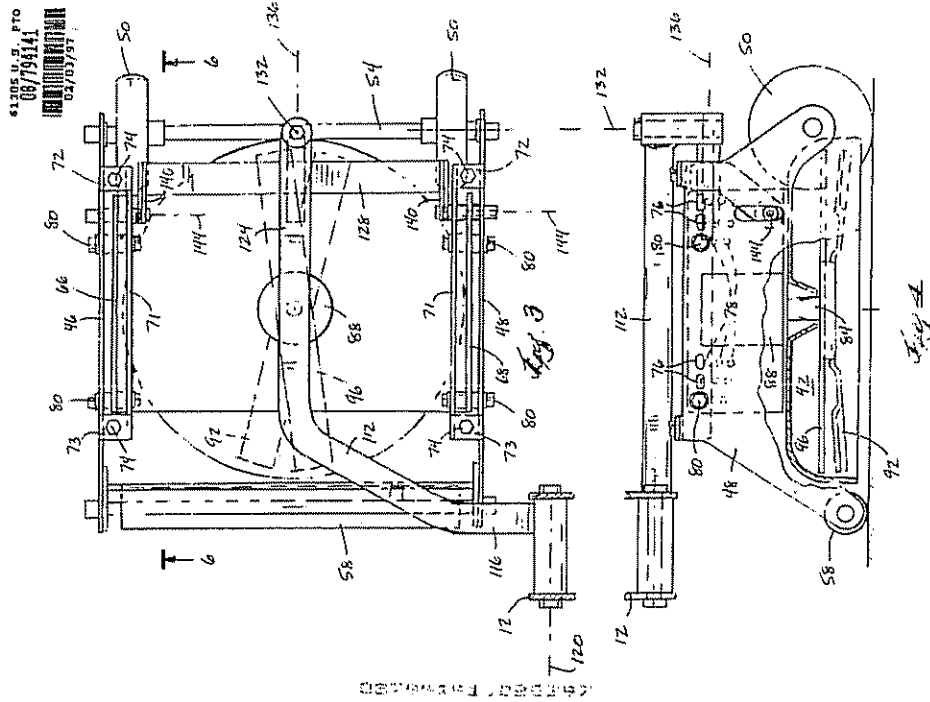
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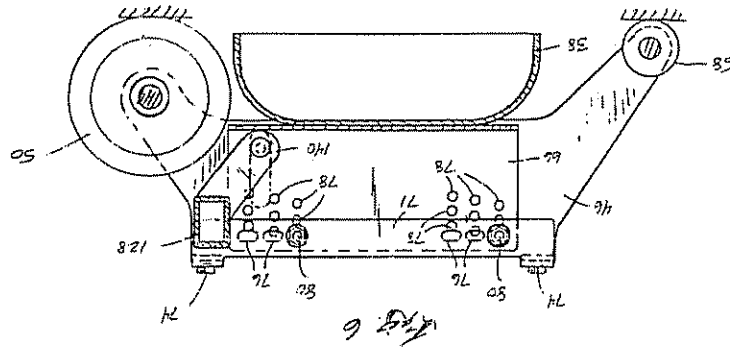


I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that those statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment under Section 1001 of Title 18 of the United States Code and that each willful false statement may jeopardize the validity of the application or any patent issued thereon.

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Inventor's signature: *Richard D. Nednar* 1-31-97 Date
Residence: Lake Mills, Wisconsin
Citizenship: United States of America
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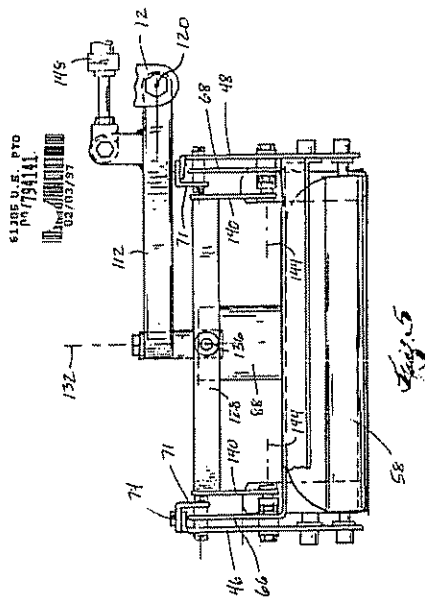
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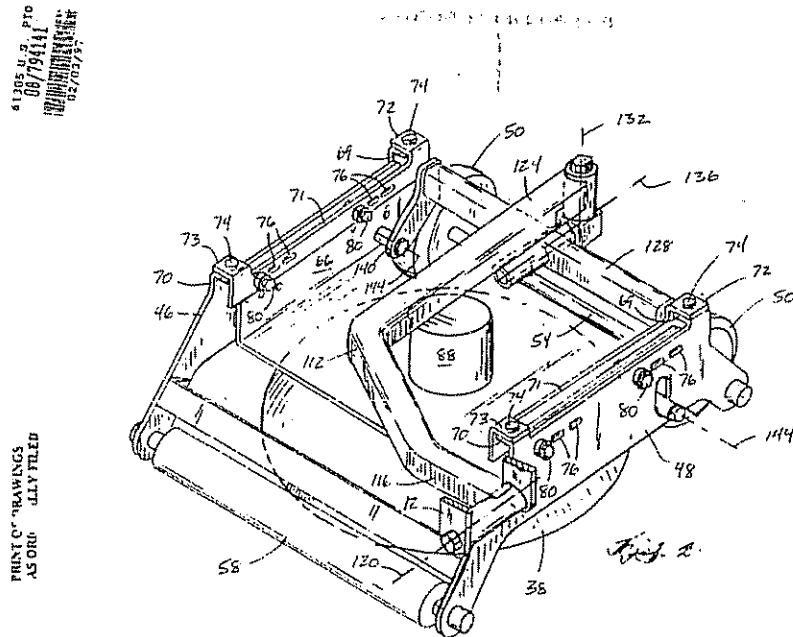
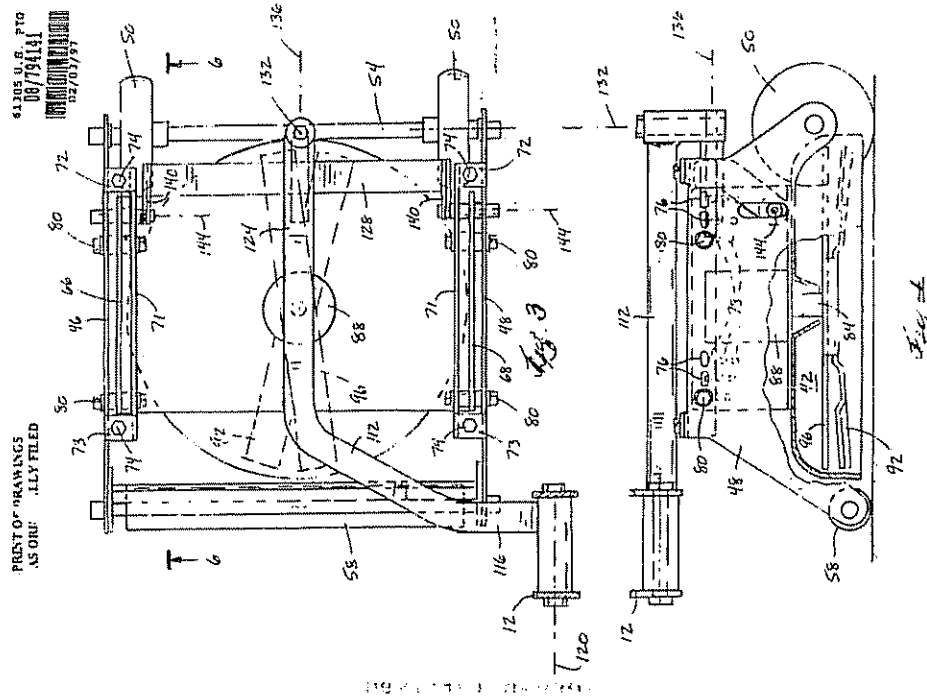


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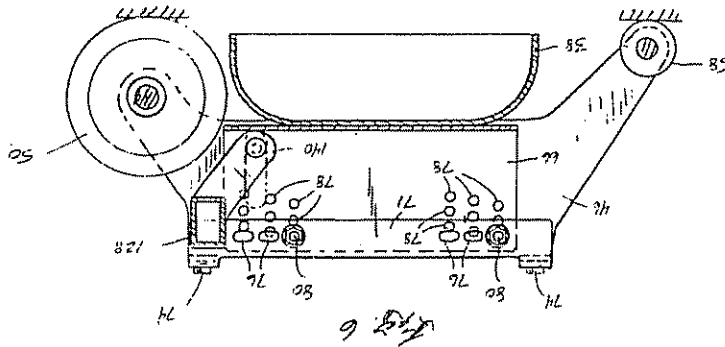
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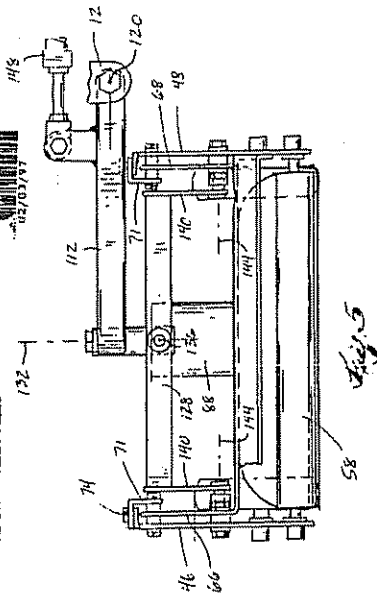


PRINT OF DRAWINGS
AS ORIGINALLY FILED



61305 U.S. PTO
08/794141
02/03/07

61305 U.S. PTO
08/794141
02/03/07



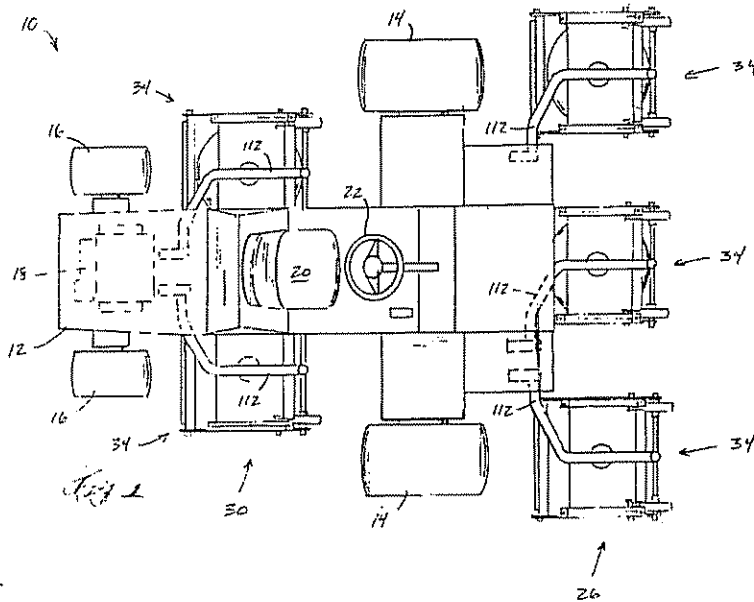
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61205 U.S. PTO
08/734/141
02/03/97

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AS ORIGINALLY FILED

3501
5/10/00
1050



IN THE U.S. PATENT AND TRADEMARK OFFICE
71477 U.S. PTO
GROUP ANT UNIT 3501

In re 05/05/97

Patent Application of

Richard D. Bednar

Serial No. 08/794,141

Filed: February 3, 1997

(I hereby declare that I am the inventor of the invention herein described, and that I am the owner of the right therein, and that I am not aware of any other person claiming an interest therein.)
Patent Office, Washington, D.C. 20531, on the date of my signature.

[Signature]
Date of Signature

"GANG-TYPE ROTARY LAWN MOWER"

RECEIVED

MAY 23 1996

GROUP 3500

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 CFR 51.97(b)

Assistant Commissioner for Patents
Washington, D.C. 20231

Six:

The Examiner's attention is directed to the references which are listed on the attached Form PTO-1449 and copies of which are attached.

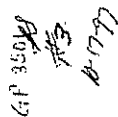
Citation of these references is respectfully requested.

Respectfully submitted,

[Signature]
DAVID K. PRICE
Reg. No. 31,557

File No. 70207/9009

Michael, Dent & Friedrich
100 State Highway
Milwaukee, WI 53202-4106
(414) 271-6560



23 07

Richard D. Bednar

Serial No. 08/794.141

dated: February 3, 1997

SAUG--TYPE ROTARY LAWN MOWER

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 CFR 51.97(b)

Assistant Commissioner for Patents
Washington, D.C. 20231

1271

The Examiner's attention is directed to the reference which is listed on the attached Form PTO-1449 and a copy of which is attached.


Citation of this reference is respectfully requested.

Respectfully submitted,

David R. Price
Agg. No. 31,557

File No. 78209/9009

Michael: Best & Friedrich LLP
100 East Wisconsin Avenue
Milwaukee, WI 53202-4108
414) 271-6560

.1477 U.S. PTO 		Sheet 1 of 1	
Form PTO-144B (Rev. 3-78)	U.S. Department of Commerce Patent and Trademark Office	App, Docket No. 70209/9009 Appx'd Richard D. Bednar	Serial No. 007954,141
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Filing Date February 3, 1987 Class 3501	

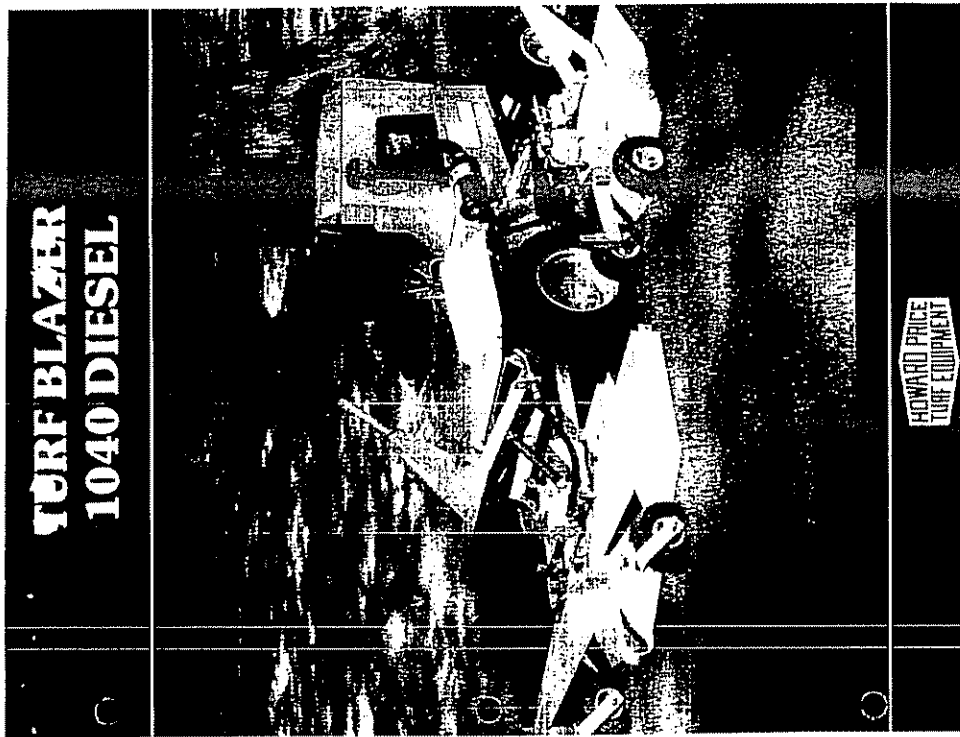
U.S. PATENT DOCUMENTS

[illegible]

Examined	Ratio Considered
Examined	1

31-10-1989

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[illegible]

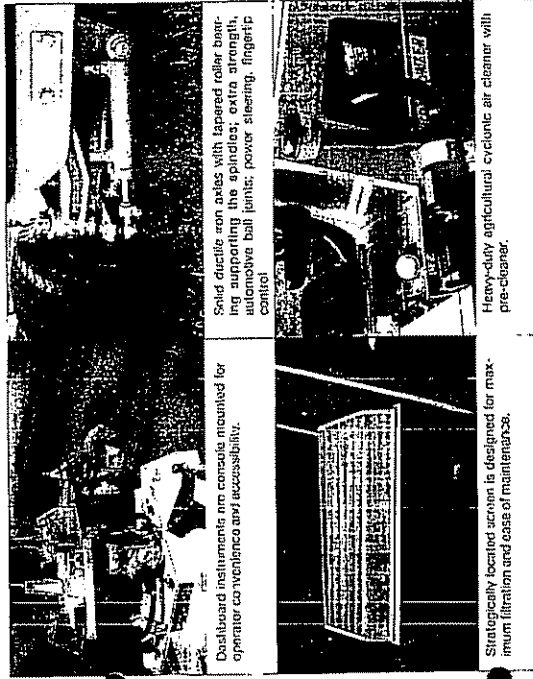
POWERED BY YANMAR

TRACTION BY SUNSTRAND AND DANA

The heavy-duty, hydrostatic transmission coupled to a Dana GT-20 axle connects engine torque directly into traction without clutches or the shifting of gears. Response to operator control of speed and direction is both smooth and positive, providing infinitely variable speed from 0 to 10 mph.

A triple B section, powerband belt transmission powers simply and efficiently for PTO drive system requirements.

Yanmar 4-cylinder diesel, water cooled 47 hp @ 3600 RPM governed down to 40 hp or 3000 RPM for exceptional diesel fuel economy. Yanmar's gear tough, 100% computer controlled, 100% cast iron and with perform about 1000 hours of dependable service.



Dashboards instruments are console mounted for operator convenience and accessibility.

Solid ductile iron axles with tapered roller bearings supporting the spindles; extra strength, automotive ball joints; power steering, fingertip control.

Strategically located screen is designed for maximum filtration and ease of maintenance.

Heavy-duty agricultural cyclonic air cleaner with pre-cleaner.

THE PRODUCTION MACHINE "HIGH CAPACITY, ECONOMICAL, HIGH-FLOATATION"



High capacity mowing of up to 5.3 acres per hour.

Cutting units may be operated individually or in any combination of the three.



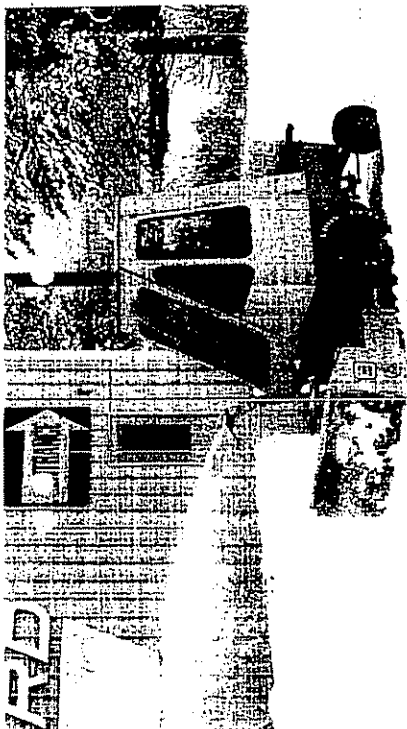
Individual decks allow for maximum flexibility.

Unique trimming with outboard wing.



Wing hydraulic driven, eliminates troublesome long belts.

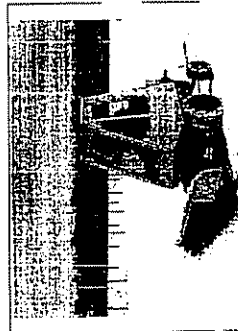
Lift and fold for ease of transport.



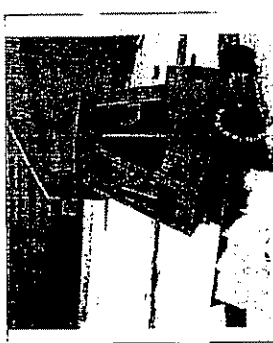
YEAR-ROUND PERFORMANCE

When the snow moves in, the 1040 moves it out with a two-stage, 60" snow blower. Electric clutch rotator enables the operator to deposit snow in any desired area with only the touch of a switch.

The steel and safety glass cab, mounted on the R.O.P.S. framework, commands a 360° view. Cab panels are demountable for use of R.O.P.S. for summer mowing season. The hot-water heater and defroster insure comfort and visibility to the operator.



The 60" broom is ideal for sweeping light snow or cleaning debris off sidewalks. Available as 30° set angle on the brush head to the right or optional manual adjustment to either side.



If you prefer plowing snow, our 60" heavy-duty plow is ideal. Available with manual angling or optional hydraulic angling. Hydraulic angling is a valuable time saving tool when working in tight conditions.

SPECIFICATIONS

TURF BLAZER 1040

ENGINE	Yanmar 4-cylinder diesel, water-cooled 47 HP @ 3600 RPM governed down to 40 at 3000 RPM, 83.11 CID, 18.05 compression ratio, full pressure lube oil pump, 6 quart capacity with spin-on filter, high efficiency/low consumption swirl type pre-combustion chamber, cast iron cylinder head, block and oil pan. Double fuel filter and fuel water separator. Fast response centrifugal type governor. Constant system for cold weather starting. Heavy duty agricultural cyclone air cleaner with pre-cleaner.
HYDRAULIC PTO DRIVE	6 1/2 gallon, tractor mounted reservoir; High capacity oil cooler.
TRACTION DRIVE	9 gallons
WHEELS/TIRES	Sunstrand model 15. In-line transmission with acceleration control valve mounted on Dana GT-20 transaxle.
CHASSIS	Front traction lines, high flotation; 23-10.50 x 12, 4-ply rating. Rear steering lines, high flotation; 18-8.50 x 6, 4-ply rating. Both front and rear tires mounted on demountable drop center rims.
BRAKES	Heavy formed and welded steel unitized frame with structural tubing reinforcement.
STEERING	Dual 7" drum type brakes. Independently operable for steering assist, single pedal for service and parking; dynamic braking through traction drive.
OPERATOR'S CONSOLE	TRW HGF power steering assembly with 15" wheel. Rear steering axle, heavy-duty, solid ductile iron. Steering spindles are supported with tapered roller bearings.
PTO DRIVE	Throttle, PTO and hydraulic lift levers. Key-operated ignition switch, locker type switches for lights, accessory and cold start, hourmeter, engine water temperature and fuel gauges, oil pressure and electrical discharge warning lights, 12V heavy-duty battery.
CERTIFICATION	High torque, triple B section band belt drive system, automatic fast response braking on disengagement, telescoping U-joint type drive shaft to attachment.
	This product conforms to ANSI specifications B71.4 1980.

104" ROTARY MOWER ATTACHMENT

WIDTH OF CUT	104"
CUTTING CAPACITY	Up to 5.3 acres per hour.
CENTER MOWER	60" rear discharge. 1 1/2" to 5 1/2" cutting height. Three (3) 1/4" x 2 1/2" x 20 1/2" heavy-duty heat treated blades on 1 1/2" blade shafts.
	11 gauged mild steel blade housing; formed and welded 3/4" steel spindle support frame for maximum rigidity; Vee-tail shock absorbing type drive to all spindles from PTO driven gearbox.
	Deck has spring counter balancing suspension system for maximum drive traction. Two (2) front mounted 4.10-3.50 x 4, 2-ply pneumatic swivel caster wheels with full roller bearing suspension. Single 2 1/2" x 4" stroke cylinder for hydraulic power lift.
WING MOWERS	Front deck can be operated with wings folded.
WING DRIVE	2 1/2" cut with rear discharge; 1 1/2" to 5 1/2" cutting height. Deck frame constructed of 1 1/2" x 2 1/2" x 11 gauge steel tubing, mounted to 3/4" heavy duty channel; Deck pins constructed of 1 1/2" gauge formed steel.
DECK MOTOR	Hydraulic drive by gearcase mounted hydraulic pump; Pump capacity of 11 GPM @ 2500 PSI, 1.15 CID. Replaces original wear plate.
DECK WHEEL	Gear type. 102 CID with internal wear plate and case drain.
	Two (2) front mounted wheels; 4.10-3.50 x 4" wide, 2-ply pneumatic casters and 10 1/4" x 3 1/2" semi-pneumatic caster wheels on rear.

ACCESSORIES

SNOW BLOWER
TYPE Two-stage, 60" with 1 1/2" diameter auger and an 18" blower fan. Electric chute rotator standard.
WEIGHT 525 lbs.

SNOW PLOW
TYPE 80", heavy-duty rolled steel blade. High carbon hardened steel edge, spring loaded blade. Optional hydraulic angling kit available.
WEIGHT 150 lbs.

BROOM
TYPE 60" brushhead by 24" diameter. Fixed angle 30° to right. Optional manual angling 30° to either side. Overall dimensions and weight approximate.
WEIGHT 300 lbs.

ROLLER PROTECTION SYSTEM (R.O.P.S.)
TYPE 1 1/2" x 2" x 1/8" wall, structural steel tubing, 14 gauge airtight, 14 gauge airtight. Meets OSHA 1926.52 and SAE J1184 standards. Vehicle height with R.O.P.S. 76".
WEIGHT 95 lbs.

CAB
TYPE Formed 14 gauge panels mount to R.O.P.S. frame. Safety glass in all windows. Windshield wiper standard.

OVERALL DIMENSIONS	
	WINGS FOLDED
HEIGHT	52"
WIDTH	80"
LENGTH W/TRACTOR	114"
WEIGHT	610#
WEIGHT W/TRACTOR	2024



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
COMMISSIONER OF PATENTS AND TRADEMARKS
Address: Washington, D.C. 20231

APPLICATION NO.	FILED DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
067797-141	02/27/03/37	DAVID R PRICE MICHAEL BEST & FRIEDRICH 100 EAST WISCONSIN AVENUE MILWAUKEE WI 53202-4108	7620979000
		PM 11/04/13	
		EXAMINER	
		RELIUS-T	
		ARTIST	
		DATE MADE	04/13/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Continuation of Patents and Trademarks

PTO-AE Form 1000
U.S. PAT. & TM. OFF.

U.S. PAT. & TM. OFF.

Office Action Summary		Applicant's Name <u>Richard D. Bidone</u>	Class <u>360</u>
Applicant's Address <u>1884 Lise Meitner</u>		Class <u>360</u>	

Serial Number: 08794,141
Art Unit:

Page 2

DETAILED ACTION

Drawings

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85; 1097 O.G. 36

New formal drawings must be filed with the changes incorporated therein. The art unit number, application number (including series code) and number of drawing sheets should be written on the reverse side of the drawings. Applicant may delay filing of the new drawings until receipt of the "Notice of Allowability" (PTOL-37 or PTO-37). If delayed, the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability" to avoid extension of time fees. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a) for filing the corrected drawings (but not for payment of the issue fee). The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

Exhaustion of time may be waived under the provisions of 37 CFR 1.136(a). In no event, however, may a response be filed after the 12 MONTH period for response expires. If the applicant fails to file a response within the shortened statutory period, the application will be considered abandoned. If the period for response is extended, such period shall, by default, expire 12 MONTHS from the mailing date of the communication.

Failure to respond within the set or extended period for response will, by default, cause the application to become ABANDONED (37 U.S.C. § 132).

Status

(Application)

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1335 O.G. 11, 453 O.G. 213.

Disposition of Claims

☐ Claim(s) 1-20 were pending in the application.

☐ Claim(s) 18-20 were allowed.

☐ Claim(s) 1-17 were rejected.

☐ Claim(s) 1-17 were objected to.

☐ Claim(s) 1-17 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on 1/17/05, is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on 1/17/05 were objected to by the Examiner.

☐ The application is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) 24-3

☐ received in the national stage application from the International Bureau (PCT Rule 1.7(a)).

*Certified copies not received.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) 24-3 ☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other

Office Action Summary

U.S. Patent and Trademark Office
PTO-520 (Rev. 3-01)

Part of Paper No. 4

Serial Number: 08/794,141

Page 3

Art Unit:

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above **except** that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the three month shortened statutory period set in the "Notice of Allowability" (PTO-37). Within that three month period, two weeks should be allowed for review of the new drawings by the Office. If a correction is determined to be unacceptable by the Office, applicant must arrange to have an acceptable correction re-submitted within the original three month period to avoid the necessity of obtaining an extension of time with extension fees. Therefore, applicant should file corrected drawings as soon as possible.

Failure to take corrective action within the set (or extended) period will result in

ABANDONMENT of the application.

Serial Number: 08/794,141

Page 4

Art Unit:

Information Disclosure Statement

The Examiner would like to note that the PTO-1449 forms have been received.

Specification

2. The disclosure is objected to because of the following informalities:

- 1) On page 4 - line 19 and page 7 - penultimate line, the missing information should be inserted (if and when available).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. Claims 7-9 and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claims 7 and 11, a cross member is stated as connecting the frame to the deck assembly. However, the specification and drawings do not show such an arrangement. Another member (L-shaped arm) connects the cross member to the frame. Clarification is requested.

In view of the above, claims 7 and 11 (as well as the additional claims listed) are considered indefinite and incomplete.

Also, in claim 11 - line 25 (last line on page 14), -- of -- should be inserted after "other" (second occurrence).

Serial Number: 08/794,141

Page 5

Art Unit:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter claimed and the prior art are such that the claimed invention would have been obvious at the time the invention was made to a person having ordinary skill in the art to which a claim is directed. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-7, 10, 11 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (5,297,378) in view of Nunee, Jr. et al (5,280,695).

Smith (submitted by Applicant) shows a substantially similar cutting arrangement as set forth in the listed claims, except for the use of a rotary cutting assembly instead of a reel-type cutting assembly. Each unit including side plates with a cutting "deck" therebetween wherein each unit is mounted to the frame of the vehicle. The back units positioned in the "gaps" of the front units.

Nunee, Jr. et al shows a gang type rotary mower with a similar arrangement (back units positioned in the gaps of the front units). The individual units driven by hydraulic motors connected to vertically mounted spindle assemblies. Rotary blades are mounted to the spindles (single or dual blade assemblies may be used since both are common in the mower art).

As for the listed claims, to modify the mower assembly of Smith to employ rotary mowers would have been considered an obvious modification to one of ordinary skill in the art at the time the present invention was made, particularly in view of the gang type rotary assembly set forth by Nunee, Jr. et al

Serial Number: 08/794,141

Page 6

Art Unit:

As set forth above, the use of dual blades (as well as the specific use of wheels) is well known within the mower art.

Allowable Subject Matter

Claims 18-20 are allowable as presently set forth.

6. Claims 8, 9, 12 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Examiner Terry Melius at telephone number (703) 208-1113.

The Examiner can normally be contacted any time Monday-Thursday.

TERA
4.9.1998
4/4/00

TERY MELIUS
PRIMARY EXAMINER
GROUP 650 7/13/68

Case #10943 (Rev. 11/54)

U.S. DEPARTMENT OF COMMERCE - Bureau of Trade Development

7941461

NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW

TTD Enaphenon review all originally filed drawing requests of whether they are designated as formal or informal. Additionally, patent examiners will review the drawings for compliance with the regulations. Drawn telephone inquiries concerning this review to the Drawing Review Branch, 703-305-8404.

- [illegible]

COMMENTS:

ATTACHMENT TO PAPER IN
DTC 17-107

九

STANDARD

11A.572

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Notice of References Cited

Application No.	Apple, Ill.
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Application No.	Apple, Ill.
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Application No.	Apple, Ill.
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Application No.	Apple, Ill.
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Application No.	Apple, Ill.
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U.S. PATENT DOCUMENTS					
	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,200,895	1-1994	Harris, Jr. et al.	576	B2E-H-X
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS						
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS						
*	DOCUMENT (including Juries, Tim, Sources, and Patent Priors)					DATE
U						
V						
W						
X						

A copy of this reference is not being furnished with this Office action.
See Manual of Patent Examining Procedure, Section 707.06(a).

A copy of this reference is not being furnished with this Office action.
See Manual of Patent Examining Procedure, Section 707.06(a).

129-6 MAIL STOP 018
870-8822 PLAZA 3-40
U.S. POSTAGE AND TELEGRAPH SERVICE

129-6 MAIL STOP 018
870-8822 PLAZA 3-40
U.S. POSTAGE AND TELEGRAPH SERVICE

Part of Paper No. 44

GP 3613 \$

1. (First Amendment) A gang-type rotary lawn mower comprising

a frame supported by wheels for movement over the ground,

a power source which is mounted on the frame and which driven at least two of the wheels,

an operator's seat mounted on the frame,

a steering system enabling the operator to steer the lawn mower,

at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and

at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,

each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.

Cancel claim 3.

-2-

UNITED STATES PATENT AND TRADEMARK OFFICE
GROUP ART UNIT 3616

In re
Patent Application of
Richard D. Bednar

Serial No. 08/794,141

Filed: February 3, 1997

Examiner: Melius, T.

GANG-TYPE ROTARY LAWN MOWER

I, Thomas A. Bednar, hereby certify that this correspondence is being deposited with the US Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patent, Washington, D.C. 20231, on the date of my signature.

Thomas A. Bednar
Signature
July 13, 1998
Date of Signature

RECEIVED
98 JUL 22 AM 10:12
U.S. PATENT OFFICE 3609

AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Patent Office action mailed April 13, 1998, please amend the application as follows.

IN THE SPECIFICATION

On page 4, line 19, in the blank insert --787.384--

On page 7, line 24, in the blank insert --787.383--

IN THE CLAIMS

07/29/1998 RECEIVED 08/04/2006 08/04/01
07/11/02 246.00 CR

4. (First Amendment) A lawn mower as set forth in claim 3) claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.

-3-

7. (First Amendment) A lawn mower as set forth in claim 1) claim 1 rotary lawn mower comprising a frame supported by wheels for movement over the ground, a power source which is mounted on the frame and which drives at least two of the wheels, an operator's seat mounted on the frame, a steering member enabling the operator to steer the lawn mower, at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assembly defining a gap between adjacent front deck assemblies, and at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies, each of the front and rear deck assemblies including a spindle-mounted cutting deck defining a downwardly opening space, a spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, wherein each deck assembly is connected to the frame in part by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one

-4-

of the side plates of the associated deck assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of the cross member ends being connected to the other of the side plates of the associated deck assembly for pivotal movement about the generally horizontal, laterally-extending axis, and the lower end of the other of the arms being connected to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

-5-

9. (First Amendment) A lawn mower as set forth in claim 7) ~~having a rotary lawn mower comprising a frame supported by wheels for movement over the ground, a power source which is mounted on the frame and which drives at least two of the wheels, an operator's seat mounted on the frame, a steering system enabling the operator to steer the lawn mower, at least two side-by-side front rotary cutting deck assemblies mounted on the frame, the front deck assemblies defining a gap between adjacent front deck assemblies, and at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies, each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a fan-like spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, wherein each deck assembly is connected to the frame in part by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one~~

-6-

of the side plates of the associated deck assembly for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side plates, and the other of the cross member ends being connected to the other of the side plates of the associated deck assembly for pivotal movement about the generally horizontal, laterally-extending axis, wherein each of the deck assemblies is connected to the frame by a respective generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

- 7 -

472 (first Amendment) A rotary lawn mower comprising a frame supported by wheels for movement over the ground.

a power source which is mounted on the frame and which drives at least two of the wheels.

an operator's seat mounted on the frame,

a steering system enabling the operator to steer the lawn mower, and

a rotary cutting deck assembly including a pair of laterally-spaced, generally vertically-extending side plates which have forward ends and which are supported for movement over the ground, a single-spindle cutting deck defining a downwardly opening space, the deck being located between the side plates and being mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates, a single spindle mounted

for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, the deck assembly being connected to the frame in part by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward ends of the side

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plates, and the other of the cross member ends being connected to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis.

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10 (First Amendment) A lawn mower as set forth in claim 11; rotary lawn mower comprising

a frame supported by wheels for movement over the ground,

a power source which is mounted on the frame and which drives at least two of the wheels,

an operator's seat mounted on the frame,

a steering system enabling the operator to steer the lawn mower, and

a rotary cutting deck assembly including a pair of laterally-spaced, generally vertically-extending side plates which have forward ends and which are supported for movement over the ground, a single-spindle cutting deck defining a downwardly opening space, the deck being located between the side plates and being mounted on the side plates such that the height of the deck relative to the ground is adjustable, a single spindle mounted for rotation about a generally vertical axis within the space, and at least one cutting blade mounted on the spindle for rotation therewith, the deck assembly being connected to the frame in part by a cross member connected to the frame for pivotal movement about a generally vertical axis and about a generally horizontal axis extending in the forward-rearward direction, the cross member having opposite, laterally-spaced ends, one of the cross member ends being connected to one of the side plates for pivotal movement about a generally horizontal, laterally-extending axis adjacent the forward end of the side

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plates, and the other of the cross member ends being connected to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis, wherein the deck assembly is connected to the frame by a generally L-shaped, horizontally-extending arm having a laterally-extending inner leg with an inner end connected to the frame for pivotal movement about a generally horizontal axis extending in the forward-rearward direction, and the arm having an outer leg extending in the forward-rearward direction, the outer leg having an outer end, and wherein the cross member is mounted on the outer end of the outer leg.

REMARKS

The Examiner's indication that claims 18-20 are allowed and that claims 8, 9, 12 and 13 contain allowable subject matter is gratefully acknowledged. Claims 8 and 12 have been rewritten to overcome the Section 112 rejection and in independent form including all of the limitations of the base claim and any intervening claims. Claims 8, 9, 12 and 13 are therefore allowable.

The specification has been amended as required by the Examiner.

Claims 7 and 11 have been amended in response to the Section 112 rejection. Specifically, these claims have been amended to specify that the deck is connected to the frame in part by the cross member. This is consistent with the specification and drawings, which disclose that the cross member and the U-shaped arm connect the deck to the frame. Claim 11 has further been amended as required by the Examiner.

Therefore, withdrawal of the Section 112 rejection is respectfully requested.

Claims 1-7, 10, 11 and 14-17 have been rejected as being unpatentable over Smith in view of Nunen. Reconsideration in view of the above amendments is respectfully requested.

Claim 1 has been amended to include the subject matter of original claim 3, which has been canceled. Claim 1 consequently specifies that each deck assembly includes a rear roller supporting the deck for movement over the ground. The

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roller extending across substantially the entire width of the deck.

Assuming for the sake of argument that it would have been obvious to combine these references as proposed by the Examiner, and Applicant does not concede this, none of the cited references teach or suggest a cutting deck as claimed by Applicant with a roller extending across substantially the entire width of the deck. As explained in Applicant's specification, the claimed roller rotates scalping and stripes the grass, both of which are aesthetically pleasing. The cited references do not provide any motivation to provide a cutting deck as claimed by Applicant with a roller extending across substantially the entire width of the deck. Nunes' rotary decks do not have rollers, as has been the rule in the prior art, and Smith does not teach rotary decks. The cited references do not suggest either modifying Nunes' decks to have the claimed rollers, or replacing Smith's rollers with rotary decks and keeping Smith's rollers. If one skilled in the art had been combining Smith and Nunes, he would have replaced Smith's reel assemblies entirely with Nunes' rotary decks, resulting in rotary decks without Applicant's claimed rollers. Given the teaching of the prior art away from a rotary deck with a roller extending across substantially the entire width of the deck, the combination of Smith and Nunes would not have led one skilled in the art to Applicant's claimed construction.

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Accordingly, claim 1 and dependent claims 2, and 4 through 6 and 10 are allowable.

Claim 4 has been amended to depend from claim 1 and is allowable for the reasons set forth above. Claim 4 has also been amended to specify that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates. This construction is clearly not suggested by any of the cited references.

Smith does not teach or suggest adjusting the height of either a reel or a rotary cutting deck by changing the position of the reel or deck relative to side plates. Nunes does not teach side plates, and certainly does not teach or suggest adjusting the height of a cutting deck by changing the position of the deck relative to side plates. The other cited references do not cure the deficiencies of Smith and Nunes.

Claim 4 therefore contains additional patentable subject matter.

Claim 7 has been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 7 has also been amended to include the limitations of claim 17. Claim 7 thus specifies that the ends of the cross member have thereon respective downwardly extending arms, the arms having respective lower ends, the lower end of one of the arms being connected to one of the side plates for pivotal movement about the generally horizontal, laterally-extending axis, and the lower end of the other of the arms being connected

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to the other of the side plates for pivotal movement about the generally horizontal, laterally-extending axis. This construction is not suggested by any of the cited references.

Smith teaches a cross member with downwardly extending arms on its ends, but Smith's arms pivot relative to the cross-member and do not pivot relative to the side plates, exactly the opposite of Applicant's claimed construction. There is no teaching in any of the cited references to modify the Smith construction to provide Applicant's claimed construction. Nunes does not even suggest the claimed side plates, let alone the claimed arms pivotally connected to the side plates. The other cited references also do not cure the deficiency of Smith.

Therefore, claim 7 is allowable.

Claim 11 has been amended to include the limitation discussed above with respect to claim 4 and is therefore allowable.

Claims 14 through 16 depend from claim 11 and are therefore also allowable.

Claim 16 includes the roller limitation discussed above with respect to claim 1 and therefore contains additional patentable subject matter.

Claim 17 includes the limitations discussed above with respect to claim 7 and therefore also contains additional patentable subject matter.

In view of the foregoing, entry of the above amendment and allowance of claims 1, 2, and 4 through 17, in addition to

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the previous allowance of claims 18 through 20, are respectfully requested.

The undersigned is available for telephone communication at any time.

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